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| 10/550,967 | 09/26/2005 | Heinrich Franz Bartosik | AT 030013 | 6112 |

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| EXAMINER | |
|---|---|
| PULLIAS, JESSE SCOTT | |
| ART UNIT | PAPER NUMBER |
| 2626 | |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/550,967 | BARTOSIK ET AL. | |
| | Examiner | Art Unit | |
| | JESSE S. PULLIAS | 2626 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *03 November 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03 November 2008* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/03/08 has been entered.

2. This office action is in response to correspondence filed 11/03/08 regarding application 10/550967, in which claims 1, 2, and 7 were amended. Claims 1-16 are currently pending in the application and have been considered.

### *Response to Arguments*

3. The new drawing overcomes the objection to the drawings, and so the objection is withdrawn.

4. The amendment to claim 2 renders the prior objection to this claim moot.

5. Applicant's arguments on pages 7-9 of the Remarks have been considered but are moot in view of the new ground(s) of rejection.

### *Claim Objections*

6. The examiner assumes “determine” in line 2 of claim 6 should be “determines”.

7. The examiner will continue to assume “a text element replacements” in line 2 of claim 8 should be “text element replacements”. The objection to this claim is maintained.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 1-8, 13, and 14 rejected under 35 U.S.C. 103(a) as being unpatentable over Mishelevich et al. (WO 01/31634) in view of Emam et al. (6,738,741).

Consider independent claim 1, Mishelevich discloses a speech recognition and correction system **(p1, lines 6-8)** which comprises at least one speech recognition device **(p6, lines 14-20, Fig 4 Processor includes SR Engine and SR Interface)** to which a spoken text can be fed, said at least one speech recognition device being possible for said spoken text to be transcribed into a recognized text, and a correction device **(p15 lines 12-31, Fig 10** proofreading device**)** for correcting the text recognized by the at least one speech recognition device, said correction device being connected to the at least one speech recognition device via a data network **(p13 lines 4-8** the Internet**)** for the transmission of the recognized text and/or of the spoken text, wherein the correction device has a lexicon of alternatives **(p15 lines 21-22,** list box 1012**)** which contains words and word sequences that can be displayed **(p15 lines 25-26,** words are shown on the interface, **Fig 12,** PhraseWord**)** by the correction device as alternatives to individual words or sequences of words **(Fig 10)** of the recognized text.

Mishelevich does not specifically mention word parts.

Emam discloses word parts **(Abstract,** the SR vocabulary contains sub-components of words**).**

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Mishelevich such that words parts can be displayed by the correction device as alternatives to individual word parts by using the vocabulary taught by Emam, in order to handle compound words, as suggested by Emam **(Col 2 lines 24-27).**

Regarding independent claim 2, it is directed to the correction device of independent claim 1, and is rejected for the same reasons as claim 1.

Consider claim 7, Mishelevich discloses a method of creating a lexicon of alternatives **(Fig 11, p16 lines 1-9)** for determining data record entries for a list of alternatives for the correction of recognized text which has been transcribed from spoken text by a speech recognition device, wherein sources of knowledge **(p 16 lines 2-9,** Data is input, categorized voice recognition segments**)** that are independent of the speech recognition device, including text files specific to the field of application **(p 16 lines 2-9** data is put into specific categories including patient history, cardiovascular, etc. The usage of text files is implied since storage of soundex codes requires a text file**)** are examined with respect to text elements, **(p16 lines 2-9,** data is categorized according to text elements**)** including words and word sequences that can be confused with one another **(p16 lines 1-2)**, and such text elements that can be confused with one

another are put together as alternatives in a data record entry of the list of alternatives **(p16 lines 1-2, p15 lines 21-22,** the confusable text elements are put together in a list (a data record entry) of alternatives**).**

Mishelevich does not specifically mention word parts.

Emam discloses word parts **(Abstract,** the SR vocabulary contains sub-components of words**).**

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Mishelevich such that words parts can be displayed by the correction device as alternatives to individual word parts by using the vocabulary taught by Emam, for reasons similar to those of claim 1.

Consider claim 3, Mishelevich discloses analysis means **(Fig 4, Text Processor 424** is an analysis means since it processes text**)** for analyzing selected text passages of the recognized text by means of character chain comparison or syntactic analysis, and for determining alternatives to the selected text passages from the lexicon of alternatives.

Regarding claim 4, Mishelevich discloses that the analysis means can be activated by a user of the correction device **(p14 lines 20-23,** the system is operated by a proofreader**).**

With respect to claim 5, Mishelevich further discloses the analysis means determines selected text passages from a cursor position or a marking information of a text processing program **(p14, lines 4-6).**

Consider claim 6, Mishelevich discloses the analysis means determines selected text passages from a time position of the spoken text and its association with the recognized text **(p13 lines 20-24).**

Regarding claim 8, Mishelevich discloses text element replacements **(p15 lines 25-28)** made in a corrected text with respect to the original recognized text transcribed by a speech recognition device are determined and recorded as alternatives **(p16 lines 7-9,** the categorized voice-recognition segments contain the text element replacements and are stored, or recorded as alternatives**)** in data record entries of the lexicon of alternatives **(p15 lines 21-22** the list is a series of data record entries**).**

Consider claims 13 and 14, Mishelevich discloses the data record entries of the lexicon of alternatives are subdivided according to speech, and according to technical field **(p16 lines 1-9,** the words are categorized into categories representing spoken sections during a medical procedure, which are technical fields**).**

10. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mishelevich et al. (WO 01/31634) in view of in view of Emam et al. (6,738,741), in further view of Ortega et al. (6,507,816).

Regarding claims 9 and 10, Mishelevich discloses the feedback of each text element replacement is returned **(p15 lines 7-8)** and the retraining of the speech recognition software is carried out **(p15 lines 7-8).** Mishelevich also discloses the speech recognition software causes alternatives to words to be displayed **(p14 lines 11-13),** and recording entries in the lexicon of alternatives **(p16 lines 7-9,** the categorized voice-recognition segments contain the text element replacements and are stored, or recorded as alternatives**)** thus suggesting, but not specifically teaching, that frequent element replacements are recorded as alternatives.

Mishelevich and Emam do not specifically teach the frequency of each text element replacement is statistically evaluated and the recording as an alternative in a data record entry of the lexicon of alternatives is only carried out when a predetermined lower limit value of the frequency, expressed by the absolute number of replacements or the ratio of replacements with respect to the overall number of words examined or with respect to the overall occurrence of a given word, is exceeded, or a predetermined upper limit is not reached.

Ortega discloses the frequency of each text element replacement **(Col 4 lines 30-41,** the user selects a text string to replace an incorrect one, **Col 4 lines 44-47** the number of times (frequency) the corrected word (or text element replacement) is used is

counted) is statistically evaluated **(Col 5 lines 1-4,** calculating percentages are a statistical evaluation) and the use of a problem solving application to provide suggestions to the speaker **(Col 5 lines 20-22)** is only carried out when a predetermined lower limit value of the frequency, **(Col 5 lines 24-29,** the calculated accuracy ratio is equivalent to the inverse of the number of replacements ratio, therefore the acceptable minimum taught in line 24 is equivalent to a predetermined lower limit on replacements ratio exceeded) expressed by the absolute number of replacements or the ratio of replacements with respect to the overall number of words examined or with respect to the overall occurrence of a given word, is exceeded.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Mishelevich and Emam by using the replacement frequency evaluations are taught by Ortega to determine when to add a word to the lexicon, in order to solve misrecognition problems as suggested by Ortega **(Col 2 lines 10-15).**

11. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mishelevich et al. (WO 01/31634) in view of in view of Emam et al. (6,738,741), in further view of Nassif et al. (6,418,410)

Consider claim 11, Mishelevich discloses the text element replacements **(p15 lines 25-28)** made in a corrected text with respect to the original recognized text transcribed by a speech recognition device are determined and recorded as alternatives **(p16 lines 7-9.** the categorized voice-recognition segments contain the text element

replacements and are stored, or recorded as alternatives) in data record entries of the lexicon of alternatives. **(p15 lines 21-22** the list is a series of data record entries**)**

Mishelevich and Emam do not specifically disclose an analysis of the acoustic similarity of text elements and that the recording as an alternative is conditional upon a predetermined measure of phonetic similarity.

Nassif discloses an analysis of the acoustic similarity of the text elements is carried out **(Col 7 lines 2-5,** the audio of the text elements is compared) and the updating the language model **(Col 6 lines 45-50)** is only carried out when a predetermined degree of phonetic similarity is found. **(Col 6 lines 51-58,** the method compares whether a predetermined statistical quality exists by comparing the phonetics.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Mishelevich and Emam such that an analysis of the acoustic similarity of the text elements is carried out and the recording as an alternative is only carried out when a predetermined degree of phonetic similarity is found, as taught by Nassif, in order to continually improve accuracy, as suggested by Nassif **(Col 1 lines 32-37).**

12. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mishelevich et al. (WO 01/31634) in view of in view of Emam et al. (6,738,741), in further view of Chen et al. (5,864,805).

Regarding claim 12, Mishelevich discloses that the text element replacements **(p15 lines 25-28)** made in a corrected text with respect to the original recognized text transcribed by a speech recognition device are determined and recorded as alternatives **(p16 lines 7-9,** the categorized voice-recognition segments contain the text element replacements and are stored, or recorded as alternatives**)** in data record entries of the lexicon of alternatives **(p15 lines 21-22** the list is a series of data record entries**).**

Mishelevich and Emam do not specifically teach an analysis of the time positions of the text element replacements is carried out and used as a condition for the recording.

Chen discloses an analysis of the time positions of text elements **(Col 3 lines 11-20,** the start and end times of the word**)** and a candidate words list is derived when for the text element there is a corresponding text element similar in terms of time **(Col 3 lines 21-23, Col 3 lines 32-39).** Chen also teaches replaced text elements are chosen from the list of alternative words **(Col 4 lines 40-46).**

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Mishelevich and Emam by conducting a time position analysis and conducting the recording only when there is a corresponding text element similar in terms of time, as suggested by Chen, in order to fix word boundaries problems as mentioned by Chen **(Col 1, lines 44-46).**

13. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mishelevich et al. (WO 01/31634) in view of Emam et al. (6,738,741), in further view of Ortega et al. (6,332,122).

Regarding claim 15, Mishelevich discloses identifying the person recording the data and, in the physician example, this can be either the physician or another medical staff member such as a nurse **(p8 lines 29-30).**

Mishelevich and Emam do not specifically teach that data record entries of the lexicon of alternatives are subdivided according to author of the original spoken or corrected text.

Ortega discloses a system in which transcribed text is associated with a speaker using a speaker ID **(Abstract).**

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Mishelevich and Emam by subdividing the data record entries of the lexicon of alternatives according to author of the original spoken or corrected text as taught by Ortega, in order to overcome difficulties in identifying multiple users, as suggested by Ortega **(Col 1 lines 19-26).**

14. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mishelevich et al. (WO 01/31634) in view of Emam et al. (6,738,741), in further view of Rozak (5,950,160).

Consider claim 16, Mishelevich discloses the feedback from the proofreader in the form of the selection of particular options of text are used for training the speech recognition software, which generates the list of alternatives **(p15 lines 7-11)** , but Mishelevich and Emam do not specifically teach that the list of alternatives is adapted online during the correction of recognized texts**.**

Rozak specifically teaches the list of alternatives is adapted online during the correction of recognized texts **(Col 5 lines 54-65,** the vocabulary, which overlaps the list of alternatives, has words added during correction, which makes it online).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Mishelevich and Emam to adapt the list of alternatives during correction as taught by Rozak, in order to improve efficiency, as suggested by Rozak. **(Col 1 lines 20-22).**

***Conclusion***

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jesse Pullias whose telephone number is 571/270-5135. The examiner can normally be reached on M-F 9:00 AM - 4:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on 571/272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571/270-6135.

16. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Jesse S. Pullias/
Examiner, Art Unit 2626

/Talivaldis Ivars Smits/
Primary Examiner, Art Unit 2626

1/9/2009